

Notice of Allowability

Application No.

10/587,128

Examiner

Alexander H. Taningco

Applicant(s)

GOTO ET AL.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/26/2007.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Amendment

Amendments filed 10/26/2007 have been entered.

Allowable Subject Matter

Claims 1-14 allowed.

The following is an examiner's statement of reasons for allowance:

With regards to independent claim 1, prior art fails to teach a tomographic device, which comprises: image reconstruction computing means which performs an image reconstruction computing on the divided image data segment regions from the projection data and generates a 3-dimensional tomographic image, wherein the image reconstruction computing means includes extracting means which extracts from the projection data 2-dimensional projection data segment regions corresponding to channel direction and row direction of the detecting means necessary for generating the 3-dimensional tomographic image of the divided image data segment regions, when taken in combination with the other limitations of the claim.

Dependent claims 2-5 and 12 are allowable by virtue of their dependency.

With regards to independent claim 6, prior art fails to teach a tomographic device, which comprises: wherein the image reconstruction computing means includes extracting means which extracts from the projection data 2-dimensional projection data

segment regions corresponding to channel direction and row direction of the detecting means necessary for generating the 3-dimensional tomographic image of the divided image data segment regions, when taken in combination with the other limitations of the claim.

With regards to independent claim 7, prior art fails to teach a tomographic method comprising: extracting from the projection data 2-dimensional projection data segment regions corresponding to channel direction and row direction of the detecting means necessary for generating the 3-dimensional tomographic image of the selected image data segment regions through the image reconstruction computing means, when taken in combination with the other limitations of the claim.

Dependent claims 9-11, 13, and 14 are allowable by virtue of their dependency.

With regards to independent claim 8, prior art fails to teach a tomographic device, which comprises: wherein the image reconstruction computing means includes a processing means which divides the image reconstruction area into a plurality of image data segment regions, cuts out from the projection data detected by the detection means 2-dimensional projection data segment regions corresponding to channel direction and row direction of the detecting means, when taken in combination with the other limitations of the claim.

Dependent claims 9-11, 13, and 14 are allowable by virtue of their dependency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Ukita (US 2003/0016791)** shows radiographic data is projected back to a two-dimensional or three dimensional reconstruction area virtually set to a region of interest of the object and reconstruction software to perform reconstruction computations for each unit area (block) formed by dividing the reconstruction area. Ukita further shows reconstruction process using filtered data as back projected data, a sectional image obtained by projecting the back projection data to a two-dimensional reconstruction area set to the region of interest and an image processor divides the two-dimensional reconstruction area into rectangular blocks. Ukita fails to teach or reasonably suggest a method comprising: wherein the image reconstruction computing means includes extracting means which extracts from the projection data 2-dimensional projection data segment regions corresponding to channel direction and row direction of the detecting means necessary for generating the 3-dimensional tomographic image of the divided image data segment regions. **Kokubun et al. (US 7,006,593)** shows means for obtaining arbitrary projection data by performing interpolation or extrapolation in the slicing direction on the plurality of projection data necessary for image reconstruction found from the divided projection data, and means for obtaining a cardiac tomogram at

an arbitrary slicing position by image-reconstructing the arbitrary projection data.

Hagiwara (US 2005/0094760) shows image reconstruction is divided into N segments, repeating N times the collection data for one segment in one cycle. Hagiwara further shows extracting projection data corresponding to a projection line formed by projection one line or a plurality of parallel lines at spacings of a plurality of pixels on a reconstruction plan. **Tsuji (US 7,212,602)** shows dividing an area corresponding to the projection image data and a reconstruction unit for creating three-dimension reconstructed image data by using the projection image data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander H. Taningco whose telephone number is (571) 272-8048. The examiner can normally be reached on Mon-Fri 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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